

# Comparisons of Job Characteristics

**Focus Occupation:** [Welders, Cutters, Solderers, and Brazers \(51-4121\)](#)

**Associated Occupation:** [Engine and Other Machine Assemblers \(51-2031\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 91

**Focus Occupation:** Welders, Cutters, Solderers, and Brazers (51-4121)  
**Associated Occupation:** Engine and Other Machine Assemblers (51-2031)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Mechanical	6.8	14.7	9.5	<< Extensive education and/or training may be required
Production and Processing	6.0	8.8	6.4	<< Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 86

**Focus Occupation:** Welders, Cutters, Solderers, and Brazers (51-4121)  
**Associated Occupation:** Engine and Other Machine Assemblers (51-2031)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Operation Monitoring	6.6	10.3	7.8	<< Extensive development of skills in this area may be required
Quality Control Analysis	5.9	10.1	7.4	<< Extensive development of skills in this area may be required
Repairing	3.4	8.1	5.9	<< Extensive development of skills in this area may be required
Troubleshooting	4.5	8.0	6.2	< A higher skill level may be required
Equipment Maintenance	3.5	7.9	5.9	<< Extensive development of skills in this area may be required
Equipment Selection	3.3	5.5	5.4	0 Current skill level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Abilities

Similarity of Focus Occupation to Associated Occupation: 93

Focus Occupation: Welders, Cutters, Solderers, and Brazers (51-4121)  
Associated Occupation: Engine and Other Machine Assemblers (51-2031)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Arm-Hand Steadiness	6.8	11.1	11.4	0	Current ability level may be sufficient
Visualization	7.5	10.7	8.6	<	Some improvement in abilities may be required
Finger Dexterity	7.6	10.6	9.7	0	Current ability level may be sufficient
Manual Dexterity	6.5	10.3	10.3	0	Current ability level may be sufficient
Control Precision	6.6	10.1	9.5	0	Current ability level may be sufficient
Multilimb Coordination	6.0	10.0	7.4	<<	Extensive improvement in abilities may be required
Extent Flexibility	4.8	9.6	5.2	<<	Extensive improvement in abilities may be required
Trunk Strength	5.7	9.6	7.4	<	Some improvement in abilities may be required
Reaction Time	4.8	9.1	7.1	<	Some improvement in abilities may be required
Hearing Sensitivity	5.6	8.5	5.5	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 83

Focus Occupation: Welders, Cutters, Solderers, and Brazers (51-4121)  
Associated Occupation: Engine and Other Machine Assemblers (51-2031)

Work Activities	Exclusivity of Activity
Examine products or work to verify conformance to specifications	15
Fabricate, assemble, or disassemble manufactured products by hand	11
Identify properties of metals for repair or fabrication activities	71
Lay out machining, welding or precision assembly projects	63
Maintain welding machines or equipment	70
Monitor the quantity of assembly output	78
Move or fit heavy objects	8
Operate hoist, winch, or hydraulic boom	34
Perform safety inspections in industrial, manufacturing or repair setting	32
Plan or organize work	51
Read blueprints	10
Read specifications	23
Read technical drawings	7
Read work order, instructions, formulas, or processing charts	9
Sharpen metal objects	85

Understand technical operating, service or repair manuals	6
Use acetylene welding/cutting torch	54
Use arc welding equipment	62
Use combination welding procedures	68
Use hand or power tools	2
Use knowledge of welding filler rod types	75
Use precision measuring tools or equipment	17
Use soldering equipment	44
Weld together metal parts, components, or structures	54

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 83

**Focus Occupation: Welders, Cutters, Solderers, and Brazers (51-4121)**  
**Associated Occupation: Engine and Other Machine Assemblers (51-2031)**

Tools and Technologies	Exclusivity
Computers	1
Content authoring and editing software	1
Cutting tools	18
Data management and query software	1
Forming tools	2
Holding and clamping tools	3
Hydraulic presses	25
Indicating and recording instruments	2
Length and thickness and distance measuring instruments	2
Lifting equipment and accessories	3
Machine tools	7
Machinery for working wood and stone and ceramic and the like	12
Metal bending and forming machinery	17
Power tools	2
Prying and bending tools	10
Rough and finishing tools	5
Soldering and brazing and welding machinery and supplies	6
Wrenches and drivers	2

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.